SANYO

FILE NO. 0-2/09

SERVICE MANUAL

Remote Control Color Television

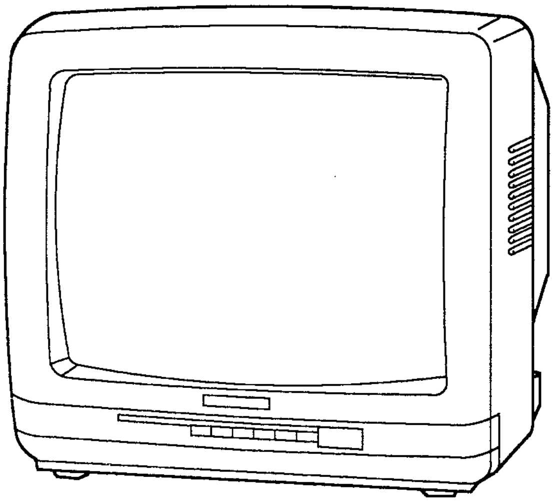
DS13530 (U.S.A.)

ORIGINAL VERSION

Chassis No. 13530-00

NOTE: Match the Chassis No. on the unit's back cover with the Chassis No. in the Service Manual.

If the Original Version Service Manual Chassis No. does not match the unit's, additional Service Literature is required. You **must** refer to "Notices" to the Original Service Manual prior to servicing the unit.



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Specifications

Power Rating	120V, 60Hz
Antenna Input Impedance	75 Ω UHF/VHF/CATV
Receiving Channel	2-13(VHF), 14-69(UHF), 01, 14-125(CATV)
Remote Ready	21 Key Remote Control
Sound Output	1.0W
Intermediate Frequency	
Picture IF Carrier	45.75MHz
Sound Carrier	41.25MHz
Color Sub Carrier	42.17MHz
Picture Tube	A34JRY24X
Semiconductors	
Integrated Circuits	8
Transistors	24 Except within Tuner and RC Pre-Amp.
Cabinet Dimensions	
Width	363mm
Height	323mm
Depth	372mm

G6YBM,PRODUCT CODE 111318681

REFERENCE No. SM510133

SAFETY INSTRUCTIONS

SAFETY PRECAUTIONS

WARNING: The chassis of this receiver has a floating ground with the potential of one half the AC line voltage in respect to earth ground. Service should not be attempted by anyone not familiar with the precautions necessary when working on this type of equipment.

The following precautions must be observed:

1. An isolation transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.
2. Comply with all cautions and safety-related notes provided on the side of the cabinet, inside the cabinet, on the chassis, and the picture tube.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as control knobs, adjustment covers, shields and barriers.

   DO NOT OPERATE THIS TELEVISION RECEIVER IF THE PROTECTIVE SHIELD IS NOT IN POSITION AND PROPERLY SECURED.
4. Before replacing the back cover of the set, thoroughly inspect the inside of the cabinet to see that no stray parts or tools have been left inside.
   Before returning any television to the customer, the service technician must perform the following safety checks to be sure that the unit is completely safe to operate without danger of electrical shock.

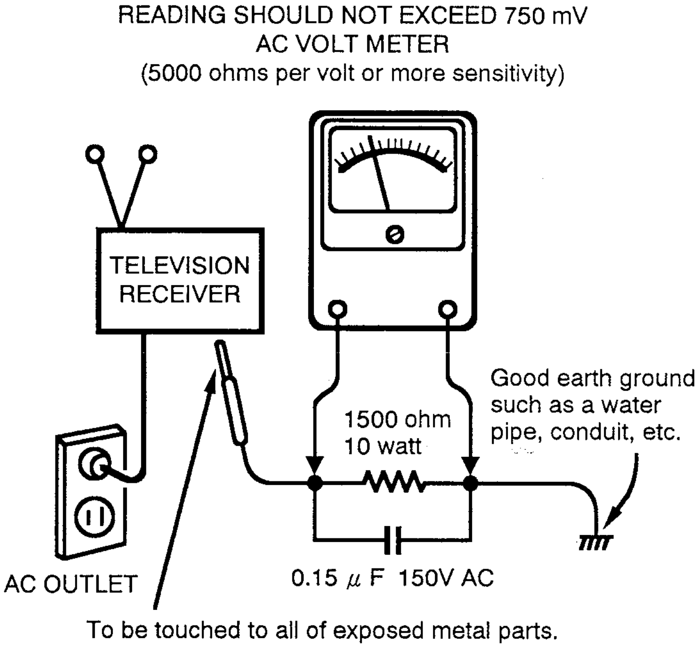
ANTENNA COLD CHECK

Remove AC plug from the 120VAC outlet and place a jumper across the two blades. Connect one lead of an ohmmeter to the jumpered AC plug, and touch the other lead to each exposed antenna terminal (UHF and VHF combination antenna terminal). The resistance must measure between 1M ohm and 5.2M ohm. Any resistance value below or above this range indicates an abnormality which requires corrective action.

LEAKAGE CURRENT CHECK

Plug the AC line cord directly into a 120 VAC outlet. (Do not use an isolation transformer for this check.) Use an AC voltmeter, that has 5000 ohms per volt or more sensitivity. Connect a 1500 ohm 10 watt resistor, paralleled by a 0.15 μ F 150 VAC capacitor, between a known good earth ground (water pipe, conduit, etc.) and all exposed metal parts of the cabinet (antennas, handle bracket, metal cabinet, screw heads, metal overlays, control shafts, etc.). Measure the AC voltage across the 1500 ohm resistor.
The AC voltage should not exceed 750 mV. A reading exceeding 750 mV indicates that a dangerous potential exists. The fault must be located and corrected. Repeat the above test with the receiver power plug reversed.

NEVER RETURN A RECEIVER TO THE CUSTOMER WITHOUT TAKING THE NECESSARY CORRECTIVE ACTION.


READING SHOULD NOT EXCEED 750 mV
AC VOLT METER
(5000 ohms per volt or more sensitivity)
TELEVISION RECEIVER
1500 ohm
10 watt
Good earth ground such as a water pipe, conduit, etc.
AC OUTLET
0.15 μ F 150V AC
To be touched to all of exposed metal parts.

Voltmeter Hook-up for Leakage Current Check

X-RADIATION PRECAUTION

The primary source of X-RADIATION in solid-state receiver is the picture tube. The picture tube is specially constructed to limit X-Ray emission. For continued X-RADIATION protection, the replacement tube must be the same type as the original (including the suffix letter in the part numbers). Excessive high voltage may produce potentially hazardous X-RADIATION. To avoid such hazards, the high voltage must be maintained within specific limits. Refer to the X-RADIATION WARNING NOTE on the CHASSIS SCHEMATIC in this service manual for specific high voltage limits. If the high voltage exceeds specified limits, check the components specified on the chassis schematic diagram and take the necessary corrective action. Carefully follow the instructions for the +B Voltage Check and the High Voltage Check to maintain the high voltage within the specified limits.

HIGH VOLTAGE HOLD-DOWN TEST

To prevent X-RADIATION from the picture tube due to excessive high voltage, a HOLD-DOWN circuit is provided in the high voltage circuit. Every time the receiver is serviced, the high voltage HOLD-DOWN circuit must be tested for proper operation. Refer to the "HIGH VOLTAGE HOLD-DOWN TEST" in service adjustments.

PRODUCT SAFETY NOTICE

When replacing components in a receiver, always keep in mind the necessary product safety precautions. Pay special attention to the replacement of components marked with a star (★) in the parts list and in the schematic diagram. To ensure safe product operation, it is necessary to replace those components with the exact same PARTS.

SERVICE ADJUSTMENTS

ANTENNA CONNECTION

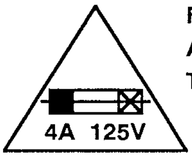
This receiver is designed for UHF/VHF reception. A 75 ohm terminal is provided for UHF and VHF receptions.

When connecting the CATV antenna system, connect the 75 ohm coaxial cable directly to the 75 ohm terminal. For 300 ohm UHF/VHF antenna, use the Adapter supplied with the TV set.

CIRCUIT PROTECTION

Fuse F001(4A) is included in the AC line. This fuse must be replaced with the proper fuse. (See Parts List.)

CAUTION



FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE, REPLACE ONLY WITH THE SAME TYPE 4A, 125V FUSE.

+B VOLTAGE CHECK

Connect voltmeter + lead to terminal "TJ1 135V" and negative lead to ground (TE7). Connect receiver to AC 120V line. Tune receiver to an active channel. Set the PICTURE ADJUST mode to "AUTO".

Voltage must measure between +133.0V and +136.1V. If the voltage is out of this range, the power circuit must be checked. No +B adjustment is provided on this chassis.

RF-AGC ADJUSTMENT

1. Tune receiver to strongest VHF station in your area.
2. Set contrast and brightness controls for maximum.
3. Turn RF-AGC Control (VR101) in the direction which causes snow to appear, then in the opposite direction until the snow just disappears.

VERTICAL SIZE ADJUSTMENT

Tune receiver to an active channel. Adjust Vert. Size Control (VR451) for full scan.

VERTICAL CENTERING ADJUSTMENT

Tune receiver to an active channel. Check that picture is in the center of TV screen. If picture center is too low, replace resistor R460 (1.8K ohm, 1/6W) with a 1K ohm 1/2W resistor. If picture center is too high, connect resistor R461 (2.2K ohm, 1/4W).

FOCUS ADJUSTMENT

Adjust Focus Control (T402) for well-defined scanning lines.

GRAYSCALE ADJUSTMENT

1. Set Red (VR704) and Blue (VR705) Drive Controls to mid position. Set Blue (VR703), Green (VR702) and Red (VR611) Bias Controls to minimum (fully counterclockwise).
2. Set Screen Control (T402) to minimum (fully counterclockwise).
3. Set Service Switch (SW701) to "SERVICE" position on Pix Tube Board.
4. Advance Screen Control (T402) clockwise to obtain just visible one color line. If line does not appear, place this control to maximum (fully clockwise).
5. Advance each Bias Control to obtain just visible white line.
6. Set Service Switch (SW701) to "NORMAL" position.
7. Adjust Red and Blue Drive Controls alternately to produce normal black and white picture in highlight areas.
8. Check for proper grayscale at all brightness levels.

Note: If Grayscale Adjustment is made after picture tube replacement, check Brightness Level Adjustment.

BRIGHTNESS LEVEL ADJUSTMENT

Note: High Voltage Check, and AGC and Grayscale Adjustments must be completed before attempting Brightness Level Adjustment.

1. Connect a color bar generator to the antenna terminal.
2. Switch the generator to the crosshatch pattern.
3. Connect voltmeter (high impedance) + lead to terminal "TP51" and - lead to terminal "TP50".
4. Set the PICTURE ADJUST mode to "AUTO".
5. Adjust Bright Level Control (VR301) for 450mVdc. Check brightness level on every active channel, readjust if necessary.

Note: Do not set to excessive brightness levels, otherwise the contrast level is suppressed.

HIGH VOLTAGE CHECK

Note: +B (+135V) Voltage Check and Grayscale Adjustment must be completed before attempting High Voltage Check.

1. Connect high voltage voltmeter + lead to anode of picture tube, and connect negative lead to ground.
2. Tune receiver to an active channel and confirm TV is operating properly.
3. Eliminate the beam current by connecting a 1K ohm 1/4W resistor across terminals "TP27" and "TP34".
4. Confirm high voltage is within 20.0KV to 22.0KV. If reading is not within range, check horizontal circuit. No high-voltage adjustment is provided on this chassis.

HIGH VOLTAGE HOLD-DOWN TEST

Every time the receiver is serviced, the High Voltage Hold-Down Circuit must be tested for proper operation by following these steps:

1. Connect receiver to AC 120V line. Tune receiver to an active channel. Set the PICTURE ADJUST mode to "AUTO".
2. Check that the voltage measured between "TP7" and "TE7" (ground side) is within 16.5V to 21V. If the voltage is out of this range, the hold-down circuit must be checked.
3. Connect a DC Voltage Supply to "TP7" through a 100 ohm 1/4W resistor and "TE7". Adjust the DC voltage to 23V. The receiver should shutdown, losing raster and sound. Then the receiver should turn off automatically. This reaction indicates that the hold-down circuit is functioning properly. If the receiver does not shutdown, a malfunction is indicated and its cause must be found and corrected.
4. To obtain picture again, remove the DC Supply and wait a short time. Now turn on the receiver.

AFT FIELD ADJUSTMENT

1. Disconnect the AC power cord. (AC 120V line)
2. Connect voltmeter + lead to "TP113" on main board and - lead to main board ground. Ground "TP113" with a short jumper lead.
3. Connect the AC power cord again, and then press the POWER key to turn on the receiver.
4. Tune TV set to a good-quality active color channel, using keys 0~9 on the remote control transmitter. Wait a few seconds until properly tuned, and then remove the short lead from terminal "TP113".
5. Turn AFT Centering Coil (T102) on main board fully clockwise, and then gradually turn the coil counterclockwise until voltage is at the maximum level (approximately 3.8V). Continue to turn the coil counterclockwise until the voltage is at the minimum level (approximately 1.2V), and then turn the coil clockwise until voltage indicates 2.5V. Voltage change in the coil adjustment is shown in Figure 1.
6. Disconnect voltmeter from chassis.

   Select every active channel with keys 0 ~ 9 and scanning keys, and check to be sure the AFT is operating properly.

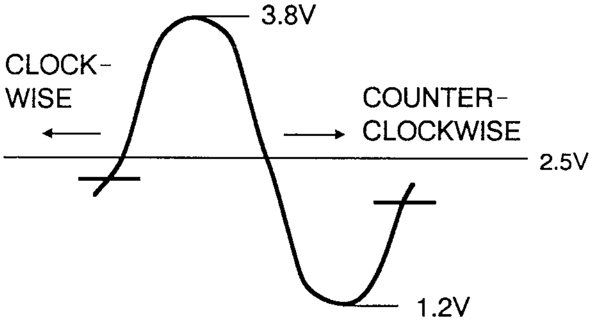


Figure 1. Voltage Change in Coil Adjustment

REMOTE CONTROL TRANSMITTER SERVICE NOTE

To repair remote control transmitter, check as follows:

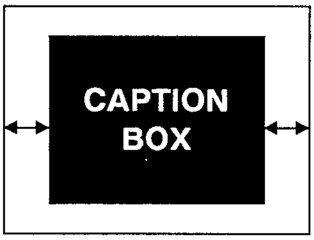
1. Check battery installation and battery voltage.If necessary, replace batteries.
2. Connect oscilloscope to Q1 "Base" and ground.
3. Check the amplitude of the pulse on the base by pressing the remote control transmitter keys.
4. If pulse does not appear, replace with a new unit.

SOUND ADJUSTMENT

1. Tune receiver to an active channel and fine tune to obtain the best picture.
2. Set volume control to middle level.
3. Adjust Sound I.F. Transformer (T151) for the best sound and minimum noise.

CAPTION DISPLAY ADJUSTMENT

1. Tune the receiver to an active TEXT channel.
2. Set the PICTURE ADJUST mode to "AUTO".
3. Set the CAPTION mode to "T1" or "T2".
4. No part of the CAPTION BOX should touch the screen edge.
   If the Box position is too far left, change the value of capacitor C542 from 330pF to 390pF.
   If the Box position is too far right, change the value of capacitor C542 from 330pF to 270pF.



P.I.F. ALIGNMENT INSTRUCTIONS

GENERAL: Shielding around the P.I.F. circuit must be in place. To prevent possible damage to the TV circuit, the TV set should be OFF when you connect the alignment equipment to the circuit.

P.I.F. ALIGNMENT

Connect the test equipment and set the TV controls as follows:

BIAS SUPPLY

Apply IF AGC +6.0V to TP12, and +13.8V DC supply to TP2.

SCOPE

Connect scope VERT INPUT to SCOPE VERT on SWEEP/MARKER GENERATOR.

Connect scope EXTERNAL HORIZ IN to scope HORIZ on SWEEP/MARKER GENERATOR.

SWEEP/MARKER GENERATOR

Connect SWEEP OUTPUT to TP132 through the matching pad as shown in Figure 1. Connect INPUT PROBE to TP16 through scope input pad as shown in Figure 2.

TELEVISION

Ground TP11 with jumper lead.

Turn on the TV set and tune to an unused channel.

Align P.I.F. as follows :

STEP AND MARKERS
P.I.F. Detection Stage Adjustment : 41.67MHz, 42.17MHz, 42.67MHz, and 45.75MHz markers ON.
ALIGNMENT PROCEDURES
Response characteristics should be similar to Figure 3. Adjust P.I.F. Detection Trans.(T101) so that the Picture Marker point of the P.I.F. detection spectrum is at 45.75MHz as shown in Figure 3.

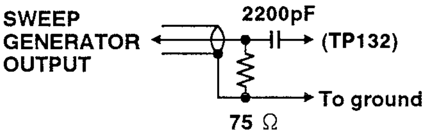


Figure 1. Matching Pad

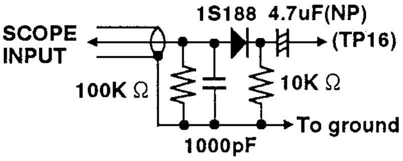


Figure 2. Scope Input Pad

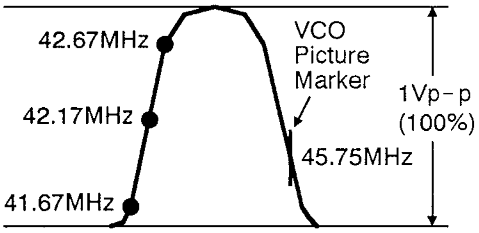


Figure 3. P.I.F. Detection Stage

PURITY AND CONVERGENCE ADJUSTMENTS

CAUTION: The Convergence and Purity adjustments have been made at the factory. Readjustment should be made only after the picture tube or deflection yoke replacement, following the steps below:

PURITY ADJUSTMENT

1. Demagnetize the picture tube and receiver using an external degaussing coil. Loosen the screw holding the Deflection Yoke and remove the three Rubber Wedges.
2. Rotate and spread the two Purity Magnet Tabs to center the vertical green belt in the picture screen. The Purity Magnets are also adjusted to obtain vertical centering of the raster.
3. Slowly slide the Deflection Yoke forward until a uniform green screen is obtained.
4. Check the purity of the red and blue screens for uniformity. If part of the picture screen is colored, adjust the Deflection Yoke position forward or backward slightly.
5. Tighten the mounting screw of the Deflection Yoke. Adjust Convergence next.

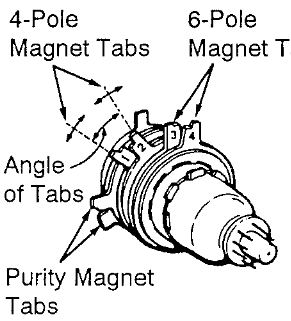


Figure 1. Magnet Tabs

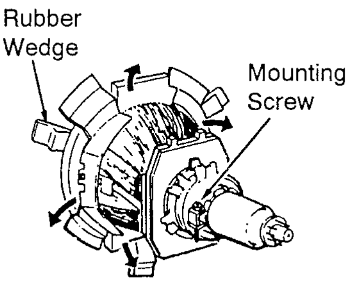
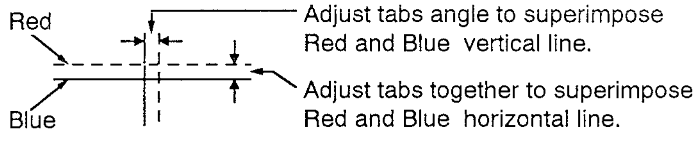


Figure 2. Deflection Yoke

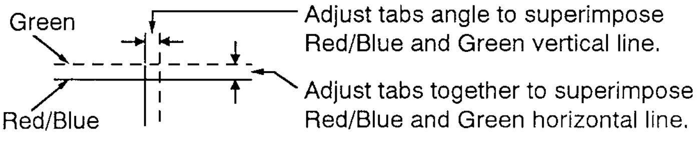
CONVERGENCE ADJUSTMENT

1. Connect a dot-crosshatch generator to the antenna terminal.
2. Adjust the angle between the 4-Pole Magnet Tabs 1 and 2, and superimpose the Red and Blue vertical lines in the center area of the picture screen. Refer to Figure 3.
3. Keeping the mutual angle of the 4-Pole Magnet Tabs, rotate them together to superimpose the Blue and Red horizontal lines in the center area of the picture screen. Refer to Figure 3.
4. Adjust the 6-Pole Magnet Tabs 3 and 4 so that the Green line superimposed on the Red/Blue lines. This is the same procedure used in Steps 2 and 3. Refer to Figure 4.



Red
Blue
Adjust tabs angle to superimpose Red and Blue vertical line.
Adjust tabs together to superimpose Red and Blue horizontal line.

Figure 3. Red and Blue Lines Movement



Green
Red/Blue
Adjust tabs angle to superimpose Red/Blue and Green vertical line.
Adjust tabs together to superimpose Red/Blue and Green horizontal line.

Figure 4. Red/Blue and Green Lines

SERVICE HINTS

POWER FAILURE DETECTOR

This receiver is equipped with a Power Failure Detector function included in the CPU which checks for an abnormal condition in the chassis power supplies, including the power supply derived from the horizontal output transformer.

If, while the power is on, a failure is caused by any of the following which results in a lower voltage supply, the CPU will turn the receiver off in 1.5 seconds to prevent unnecessary damage:

- Failure within the power supply circuits.
- A short circuit in the load side from the supply.
- Stoppage of the Horizontal Output Oscillator caused by the X-Radiation protection Hold-Down Circuit.

If, while the power is off, the power is switched on and any of these failures remains uncorrected, the CPU will shut off the power within 3 seconds.

Check the following if the receiver is turned off by the power failure detector.

1. Connect a DC Voltmeter to the following TEST POINT.

TJ5 9V

2. Press the power key and check for the proper voltage supply.
3. If the voltage is low, the power failure detector should turn the receiver off within 3 seconds.
4. Check all circuits listed above.

MECHANICAL DISASSEMBLIES

CABINET BACK REMOVAL

1. Refer to Figure 1, remove 5 screws.
2. Pull off cabinet back.

CHASSIS REMOVAL

1. Remove cabinet back.
2. Discharge the picture tube anode (2nd anode lead) to the dag coating (picture tube grounding lead).
3. Disconnect Degaussing coil socket (KD), Picture tube socket, Deflection yoke connector (KX), Speakers connector (KSP), picture tube ground leads and 2nd anode lead.
4. Rmove chassis completely by sliding it straight back.

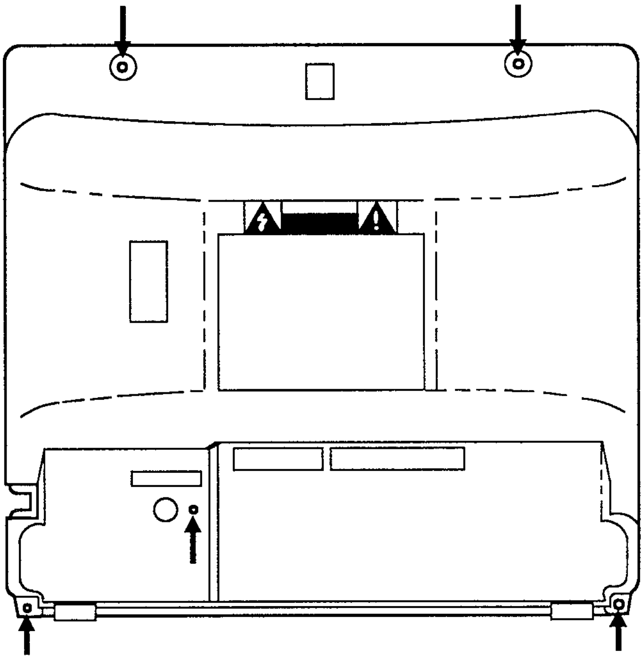


Figure 1. Cabinet Back Removal

PICTURE TUBE REMOVAL

CAUTION: Do not disturb the deflection yoke or magnet assembly on the picture tube neck. Care must be taken to keep these assemblies intact, unless picture tube is being replaced.
Discharge the picture tube to the coating before handling the tube.

1. Remove chassis, referring to "Chassis Removal" instructions.
2. Place cabinet's front face down on a soft surface.
3. Remove the screw on each corner of the picture tube and GENTLY lift the picture tube out of the cabinet.
4. Install a replacement picture tube in reverse order. Properly install the degaussing coil and picture tube grounding lead on the picture tube, referring to Figure 2.

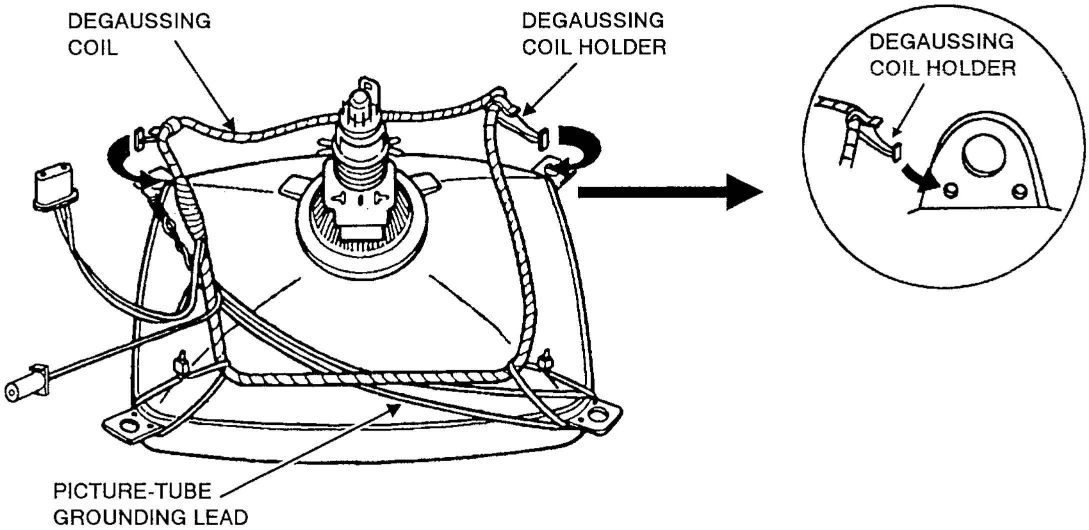


Figure 2. Picture Tube Replacement

REMOTE CONTROL TRANSMITTER DISASSEMBLY

1. Press the battery cover downward and slide it in the direction of the arrow to remove it. See Figure 1.
2. Remove the screw located inside the compartment.
3. Pulling at the rear of bottom section, push the top section of the cabinet. Proceed by pressing in at the sides of top section, while pulling the bottom from the top. See Figure 2.

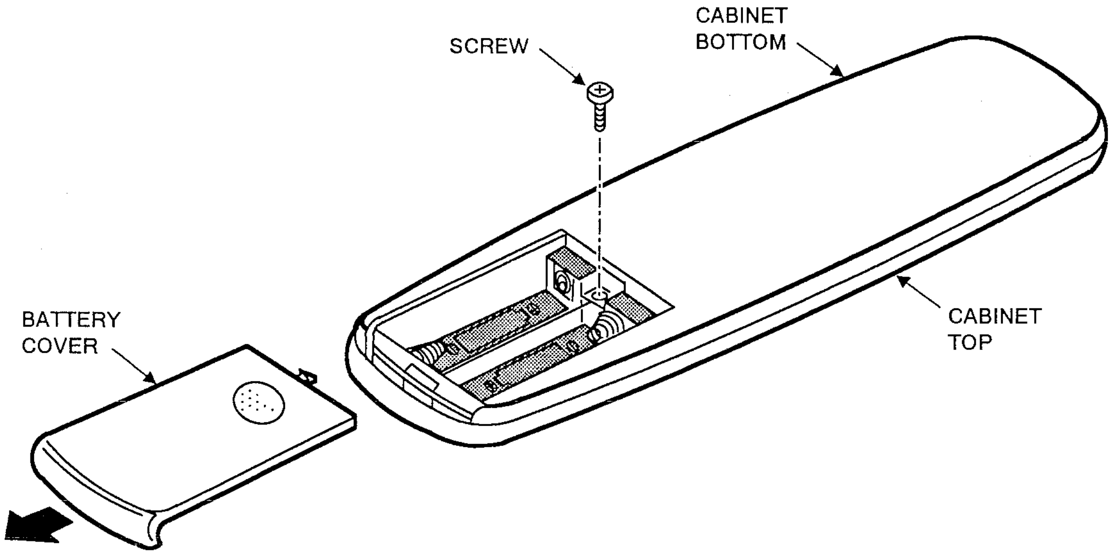


Figure 1.

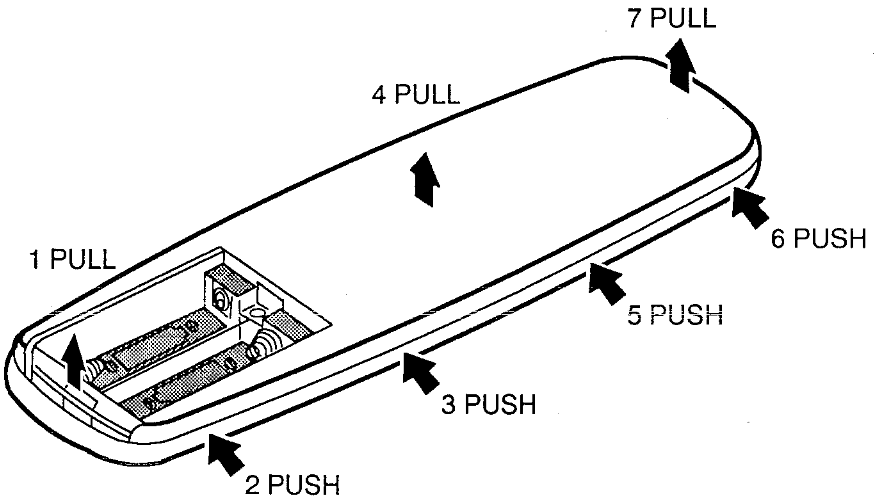


Figure 2.

Remote Control Transmitter Disassembly

CHASSIS ELECTRICAL PARTS LIST

CAUTION: To protect against electric shock and for continued product safety, refer to Safety Precautions, X-Radiation Precaution, High Voltage Hold-Down Test and Product Safety Notice on Page 2.

PRODUCT SAFETY NOTICE

PRODUCT SAFETY SHOULD BE CONSIDERED WHEN A COMPONENT REPLACEMENT IS MADE IN ANY AREA OF A RECEIVER. COMPONENTS INDICATED BY A STAR(★) IN THIS PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATE COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. IT IS PARTICULARLY RECOMMENDED THAT ONLY PARTS DESIGNATED ON THE FOLLOWING PARTS LIST BE USED FOR COMPONENT REPLACEMENT DESIGNATED BY A STAR. NO DEVIATIONS FROM RESISTANCE, WATTAGE AND VOLTAGE RATINGS MAY BE MADE FOR REPLACEMENT ITEMS DESIGNATED BY A STAR.

NOTE ; Parts having Location Number are located in the following boards.

Numbers under 600 Series	In the Main Board.
Numbers 700 Series	In the Picture Tube Socket Board.
Numbers 800 Series	In the Main Board.
Numbers 900 Series	In the Antenna Terminal Board and Out of Board.
Numbers 1000 Series	In the Main Board.
Numbers 1500 Series	In the Main Board.

CAPACITORS

NOTES:
Read description in the Capacitor as follows:

(Example)
CERAMIC 100P K 50V

Rated Voltage
Tolerance Symbols:
less than 10PF
A...Not specified
B... ± 0.1PF C... ± 0.25PF
D... ± 0.5PF F... ± 1PF
G... ± 2PF R...+0.25 − 0PF
S...+0 − 0.25PF E...+0 − 1PF
more than 10PF
A...Not specified
B... ± 0.1% C... ± 0.25%
D... ± 0.5% F... ± 1%
G... ± 2% H... ± 3%
J... ± 5% K... ± 10%
L... ± 15% M... ± 20%
N... ± 30% P...+100 − 0%
Q...+30 − 10% T...+50 − 10%
U...+75 − 10% V...+20 − 10%
W...+100 − 10% X...+40 − 20%
Y...+150 − 10% Z...+80 − 20%
Rated Value: P...Pico Farad U...Micro Farad

Material:

CERAMIC	Ceramic
MT-PAPER	Metalized Paper
POLYESTER	Polyester
MT-POLYEST	Metalized Polyester
POLYPRO	Polypropylene
MT-POLYPRO	Metalized Polypropylene
COMPO-FILM	Composite Film
MT-COMPO	Metalized Composite
STYRENE	Styrene
TA-SOLID	Tantalum Solid
AL-SOLID	Aluminum Solid
ELECT	Electrolytic
NP-ELECT	Non-Polarized Electrolytic
OS-SOLID	Aluminum Solid with Organic Semiconductive Electrolytic

Schematic Location	Part No.	Description
★C001	404 047 3503	MT-POLYEST 0.1U M 125V
	404 066 1603	MT-POLYEST 0.1U M 275V
★C004	403 075 7101	CERAMIC 1000P K 500V
★C005	403 075 7101	CERAMIC 1000P K 500V
C006	404 049 4706	ELECT 330U M 200V
C007	403 103 0005	ELECT 4.7U M 160V
★C021	403 075 7101	CERAMIC 1000P K 500V
C022	403 047 5005	ELECT 470U M 25V
C023	403 038 6301	ELECT 220U M 6.3V
C101	403 069 8305	CERAMIC 0.01U Z 50V
C102	403 069 8305	CERAMIC 0.01U Z 50V
C104	403 067 6709	MT-COMPO 0.22U J 50V
	403 166 8109	MT-POLYEST 0.22U J 63V
C106	403 049 9803	ELECT 2.2U M 50V
C107	403 069 0507	CERAMIC 1000P K 50V
C108	403 028 2009	CERAMIC 56P J 50V
C109	403 069 8305	CERAMIC 0.01U Z 50V
C110	403 060 8205	POLYESTER 0.033U K 50V
	403 060 8809	POLYESTER 0.033U K 50V
C113	403 048 6308	ELECT 0.47U M 50V
C114	403 069 8305	CERAMIC 0.01U Z 50V
C120	403 041 2109	ELECT 47U M 10V
C151	403 069 8305	CERAMIC 0.01U Z 50V
C152	403 063 5706	POLYESTER 8200P K 50V
	403 063 6307	POLYESTER 8200P K 50V
C153	403 068 9006	CERAMIC 100P K 50V
C160	403 046 9905	ELECT 4.7U M 25V
C231	403 049 0008	ELECT 1U M 50V
C232	403 048 6308	ELECT 0.47U M 50V
C300	403 074 8901	CERAMIC 680P K 50V
C302	403 069 8305	CERAMIC 0.01U Z 50V
C303	403 011 3501	CERAMIC 120P J 50V
C304	403 022 6003	CERAMIC 33P J 50V
C306	403 022 6003	CERAMIC 33P J 50V
C307	403 049 0008	ELECT 1U M 50V
C308	403 049 0008	ELECT 1U M 50V
C309	403 008 5204	CERAMIC 10P D 50V
C312	403 049 0008	ELECT 1U M 50V
C313	403 048 6308	ELECT 0.47U M 50V
C315	403 031 8104	CERAMIC 7P D 50V

Schematic Location	Part No.	Description
C316	403 041 8804	ELECT 10U M 16V
C321	403 058 3205	POLYESTER 0.015U K 50V
	403 058 3809	POLYESTER 0.015U K 50V
C322	403 049 9803	ELECT 2.2U M 50V
C324	403 073 6403	CERAMIC 470P K 50V
C341	403 043 0202	ELECT 220U M 16V
C398	403 040 3701	ELECT 220U M 10V
C399	403 041 2109	ELECT 47U M 10V
C401	403 042 7707	ELECT 22U M 16V
C402	403 074 8901	CERAMIC 680P K 50V
C403	403 048 6308	ELECT 0.47U M 50V
C404	403 049 9803	ELECT 2.2U M 50V
C406	403 060 8205	POLYESTER 0.033U K 50V
	403 060 8809	POLYESTER 0.033U K 50V
C407	403 075 7101	CERAMIC 1000P K 500V
C409	403 075 9006	CERAMIC 150P K 500V
C414	403 038 9708	ELECT 330U M 6.3V
C420	403 073 6403	CERAMIC 470P K 50V
C421	403 048 6308	ELECT 0.47U M 50V
C428	403 103 0005	ELECT 4.7U M 160V
★C432	404 060 0909	MT-POLYPRO 4200P H 1.5K
★C433	403 165 6700	CERAMIC 680P K 3K
	403 185 9408	CERAMIC 680P K 3K
★C434	403 076 4000	CERAMIC 4700P K 500V
★C437	403 082 9006	POLYPRO 0.27U J 200V
C451	403 045 7803	ELECT 220U M 25V
C452	403 204 6104	ELECT 1U M 50V
C453	403 046 9905	ELECT 4.7U M 25V
C456	403 051 0607	ELECT 4.7U M 50V
C457	403 054 0703	ELECT 47U M 35V
C458	403 042 4805	ELECT 1000U M 16V
C460	403 071 5606	CERAMIC 220P K 50V
C461	403 057 0403	POLYESTER 0.01U K 50V
	403 057 1004	POLYESTER 0.01U K 50V
C464	403 073 6403	CERAMIC 470P K 50V
C474	404 064 7102	ELECT 47U M 160V
C476	403 053 2104	ELECT 220U M 35V
C477	404 056 5307	NP-ELECT 2.2U M 100V
C478	403 076 3607	CERAMIC 470P K 500V
C479	403 076 3607	CERAMIC 470P K 500V
C481	403 076 3607	CERAMIC 470P K 500V
C482	403 044 1703	ELECT 470U M 16V
C483	403 051 0607	ELECT 4.7U M 50V
C484	403 044 1703	ELECT 470U M 16V
C501	403 043 0202	ELECT 220U M 16V
C502	403 038 8602	ELECT 33U M 6.3V
C503	403 069 8305	CERAMIC 0.01U Z 50V
C511	403 049 0008	ELECT 1U M 50V
C521	403 047 8402	ELECT 0.1U M 50V
C522	403 074 5702	CERAMIC 560P K 50V
C523	403 047 8402	ELECT 0.1U M 50V
C524	403 069 0507	CERAMIC 1000P K 50V
C528	403 022 1008	CERAMIC 30P J 50V
C529	403 022 1008	CERAMIC 30P J 50V
C532	403 008 5204	CERAMIC 10P D 50V
C533	403 041 8804	ELECT 10U M 16V
C534	403 022 6003	CERAMIC 33P J 50V
C536	403 022 6003	CERAMIC 33P J 50V
C537	403 041 8804	ELECT 10U M 16V
C541	403 060 8205	POLYESTER 0.033U K 50V
	403 060 8809	POLYESTER 0.033U K 50V
C542	403 072 7708	CERAMIC 330P K 50V
C543	403 060 8205	POLYESTER 0.033U K 50V
	403 060 8809	POLYESTER 0.033U K 50V
C551	403 041 8804	ELECT 10U M 16V
C552	403 041 8804	ELECT 10U M 16V
C553	403 041 8804	ELECT 10U M 16V
C554	403 041 8804	ELECT 10U M 16V

Schematic Location	Part No.	Description
C594	403 030 5104	CERAMIC 68P J 50V
C595	403 030 5104	CERAMIC 68P J 50V
C596	403 030 5104	CERAMIC 68P J 50V
C597	403 030 5104	CERAMIC 68P J 50V
C598	403 030 5104	CERAMIC 68P J 50V
C601	403 039 6508	ELECT 100U M 10V
C602	403 041 4509	ELECT 470U M 10V
C603	403 067 5603	MT-COMPO 0.1U J 50V
	403 166 6808	MT-POLYEST 0.1U J 63V
C606	403 044 1703	ELECT 470U M 16V
C607	403 049 0008	ELECT 1U M 50V
C608	403 071 7402	CERAMIC 2200P K 50V
C701	403 071 7402	CERAMIC 2200P K 50V
C703	403 072 7708	CERAMIC 330P K 50V
C705	403 072 7708	CERAMIC 330P K 50V
C707	403 072 7708	CERAMIC 330P K 50V
★C708	403 077 2708	CERAMIC 1000P P 2K
	403 175 3409	CERAMIC 1000P P 2K

DIODES

★D002	407 005 7605	DIODE EM2B
	407 013 3200	DIODE 1S1887A
	408 008 8606	DIODE GP15G
★D003	407 005 7605	DIODE EM2B
	407 013 3200	DIODE 1S1887A
	408 008 8606	DIODE GP15G
★D004	407 005 7605	DIODE EM2B
	407 013 3200	DIODE 1S1887A
	408 008 8606	DIODE GP15G
★D005	407 005 7605	DIODE EM2B
	407 013 3200	DIODE 1S1887A
	408 008 8606	DIODE GP15G
★D021	407 005 8602	DIODE ERA15-02
	407 011 3004	DIODE S5277B
	407 088 6502	DIODE MPG06D
	408 009 9404	DIODE 1N4002ID
D022	407 005 4505	DIODE DS442X
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
	408 008 2406	DIODE 1N4148
D023	407 056 8002	ZENER DIODE RD5.1EB2(5.1V)
	407 056 8200	ZENER DIODE RD5.1EB3(5.1V)
	407 151 8402	ZENER DIODE UZ-5.1BCB(5.1V)
	407 163 8209	ZENER DIODE UZ-5.1BCC(5.1V)
D231	407 005 4505	DIODE DS442X
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
	408 008 2406	DIODE 1N4148
D303	407 005 4505	DIODE DS442X
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
	408 008 2406	DIODE 1N4148
D306	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
	408 008 2406	DIODE 1N4148
★D411	407 158 1307	ZENER DIODE HZ11B2L(11V)
★D412	407 158 1307	ZENER DIODE HZ11B2L(11V)
D436	407 007 6606	DIODE ES1
	407 124 5506	DIODE RMPG06G
	407 124 6404	DIODE ERA18-04
D451	407 005 8602	DIODE ERA15-02
	407 011 3004	DIODE S5277B

Schematic Location	Part No.	Description
	407 088 6502	DIODE MPG06D
	408 009 9404	DIODE 1N4002ID
D474	407 007 7603	DIODE EU2
D476	407 007 6606	DIODE ES1
	407 124 5506	DIODE RMPG06G
	407 124 6404	DIODE ERA18-04
D478	407 005 8602	DIODE ERA15-02
	407 011 3004	DIODE S5277B
	407 088 6502	DIODE MPG06D
	408 009 9404	DIODE 1N4002ID
D481	407 007 7603	DIODE EU2
D483	407 011 4407	DIODE TVR1G
D501	407 056 8002	ZENER DIODE RD5.1EB2(5.1V)
	407 056 8200	ZENER DIODE RD5.1EB3(5.1V)
	407 151 8402	ZENER DIODE UZ-5.1BCB(5.1V)
	407 163 8209	ZENER DIODE UZ-5.1BCC(5.1V)
D503	407 056 2307	ZENER DIODE RD36EB1(36V)
	407 163 9503	ZENER DIODE UZ-36BCA(36V)
D535	407 056 8002	ZENER DIODE RD5.1EB2(5.1V)
	407 056 8200	ZENER DIODE RD5.1EB3(5.1V)
	407 151 8402	ZENER DIODE UZ-5.1BCB(5.1V)
	407 163 8209	ZENER DIODE UZ-5.1BCC(5.1V)
D555	407 005 4505	DIODE DS442X
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
	408 008 2406	DIODE 1N4148
D556	407 005 4505	DIODE DS442X
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
	408 008 2406	DIODE 1N4148
D601	407 005 4505	DIODE DS442X
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
	408 008 2406	DIODE 1N4148
D602	407 005 4505	DIODE DS442X
	407 013 1206	DIODE 1S1555
	407 013 4207	DIODE 1S2076
	407 013 7109	DIODE 1S2473
	408 008 2406	DIODE 1N4148

INTEGRATED CIRCUITS

★IC001	409 047 8602	IC STR30135
★IC101	409 274 3302	IC LA7673
IC341	409 026 9101	IC L78M09-RA
★IC451	409 173 2703	IC LA7837
IC501	410 223 9504	IC M37264M3-521SP
IC511	409 270 0008	IC ST24C01B1
	409 321 0902	IC 24LC01B/P
	409 321 7307	IC XLS24C01AP
IC521	409 301 2803	IC MN1381-Q
IC601	409 343 0409	IC TDA7231A

COILS

★LF001	610 031 5938	LINE FILTER
	610 031 6034	LINE FILTER
	610 031 6041	LINE FILTER
	610 031 6065	LINE FILTER
	610 031 6072	LINE FILTER
L104	645 008 2733	INDUCTOR, 12U K
L301	645 001 4567	INDUCTOR, 10U K
L306	645 008 0234	INDUCTOR, 56U J

Schematic Location	Part No.	Description
L401	610 032 5852	FILTER COIL
	610 032 5869	FILTER COIL
L402	645 003 9874	INDUCTOR, 68U K
L403	610 031 9998	PIPE CORE
L404	610 031 9998	PIPE CORE
L533	645 008 2894	INDUCTOR, 5.6U K
L538	645 008 2894	INDUCTOR, 5.6U K
★L901	610 030 4765	DEGAUSSING COIL
	610 030 5137	DEGAUSSING COIL
	645 002 5594	COIL, DEGAUSSING
	645 002 5600	COIL, DEGAUSSING
★L902	610 003 5270	DEFLECTION YOKE
	610 003 5287	DEFLECTION YOKE

TRANSISTORS

Q021	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q022	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q023	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
	406 000 6804	TR 2SA1015-GR(SAN)
Q101	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R

Schematic Location	Part No.	Description
	406 000 6804	TR 2SA1015-GR(SAN)
Q303	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q330	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
	406 000 6804	TR 2SA1015-GR(SAN)
Q341	405 023 5009	TR 2SD400-E-MP
	405 023 5306	TR 2SD400-F-MP
Q401	405 040 6102	TR 2SC2228M
	406 000 5302	TR 2SC2229-M(SAN-1)
★Q402	405 022 6601	TR 2SD1649-CTV-YB
Q421	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
	406 000 6804	TR 2SA1015-GR(SAN)
Q422	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
	406 000 6804	TR 2SA1015-GR(SAN)
Q535	405 001 7407	TR 2SA1015-O(SAN)
	405 001 7605	TR 2SA1015-Y(SAN)
	405 004 3109	TR 2SA564A-Q(CU)
	405 004 3208	TR 2SA564A-R(CU)
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 006 1103	TR 2SA933-Q
	405 006 1202	TR 2SA933-R
	405 006 1707	TR 2SA933S-Q
	405 006 1806	TR 2SA933S-R
	406 000 6804	TR 2SA1015-GR(SAN)
Q541	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q542	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q551	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q593	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q594	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP

Schematic Location	Part No.	Description
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q595	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q596	405 011 7305	TR 2SC1740-Q
	405 011 7404	TR 2SC1740-R
	405 011 7503	TR 2SC1740-S
	405 011 8401	TR 2SC1740S-Q
	405 011 8500	TR 2SC1740S-R
	405 011 8609	TR 2SC1740S-S
	405 012 2002	TR 2SC1815-GR
	405 012 2101	TR 2SC1815-O
	405 012 2309	TR 2SC1815-Y
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
	405 020 7501	TR 2SC945A-PA
	405 020 7709	TR 2SC945A-QA
	405 020 7907	TR 2SC945A-RA
Q597	405 019 2708	TR 2SC536-F-NP
Q598	405 019 2708	TR 2SC536-F-NP
Q701	405 010 6507	TR 2SC1473NC-P
	405 010 6606	TR 2SC1473NC-Q
	405 010 6705	TR 2SC1473NC-R
Q703	405 010 6507	TR 2SC1473NC-P
	405 010 6606	TR 2SC1473NC-Q
	405 010 6705	TR 2SC1473NC-R
Q705	405 010 6507	TR 2SC1473NC-P
	405 010 6606	TR 2SC1473NC-Q
	405 010 6705	TR 2SC1473NC-R

RESISTORS

NOTES:
Read description in the Resistor as follows:

(Example)
CARBON 4.7K J A 1/4W

Rated Wattage

Performance Symbols:
A...General B...Non-flammable
Z...Low noise
Other...Temperature coefficient

Tolerance Symbols:
A... ± 0.05% B... ± 0.1% C... ± 0.25%
D... ± 0.5% F... ± 1% G... ± 2%
J... ± 5% K... ± 10% M... ± 20%
P...+5 − 15%

Rated Value, ohms:
K...1,000 M...1,000,000

Material:
CARBON ·········· Carbon
MT-FILM ·········· Metal Film
OXIDE-MT ········ Oxide Metal Film
SOLID ············· Composition
MT-GLAZE ······· Metal Glaze
WIRE WOUND ····· Wire Wound
CERAMIC RES ···· Ceramic
FUSIBLE RES ····· Fusible

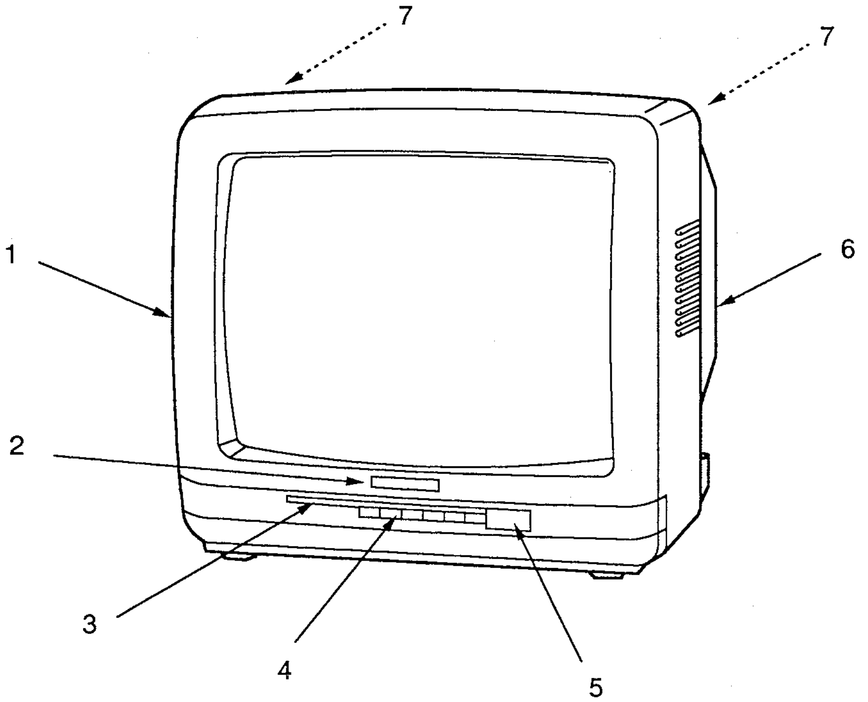
Schematic Location	Part No.	Description
★R001	402 055 3201	WIRE WOUND 1 KA WA 6W
	402 055 3300	WIRE WOUND 1 KA ZA 6W
R002	401 007 2903	CARBON 1M JA 1/2W
R004	401 012 7009	CARBON 10K JA 1/4W
R005	401 016 5803	CARBON 220K JA 1/4W
★R006	401 010 2600	CARBON 47 JB 1/2W
★R007	401 068 6209	OXIDE-MT 5.6 JA 2W
★R008	402 056 5600	WIRE WOUND 180 JA 15W
★R021	402 057 9300	WIRE WOUND 390 KA 6W
	402 058 9903	WIRE WOUND 390 KA 6W
★R022	402 057 9300	WIRE WOUND 390 KA 6W
	402 058 9903	WIRE WOUND 390 KA 6W
R023	401 025 7805	CARBON 2.2K JA 1/6W
★R024	401 059 6706	OXIDE-MT 180 JA 1W
R025	401 027 2600	CARBON 5.6K JA 1/6W
R026	401 024 7004	CARBON 1K JA 1/6W
R027	401 026 9907	CARBON 4.7K JA 1/6W
R028	401 027 2600	CARBON 5.6K JA 1/6W
R030	401 011 1602	CARBON 680 JA 1/2W
R101	401 025 1605	CARBON 1.5K JA 1/6W
R102	401 024 7707	CARBON 100K JA 1/6W
R103	401 026 1604	CARBON 270K JA 1/6W
R104	401 026 1604	CARBON 270K JA 1/6W
R105	401 027 0309	CARBON 47K JA 1/6W
R107	401 027 2600	CARBON 5.6K JA 1/6W
R108	401 024 7004	CARBON 1K JA 1/6W
R109	401 024 9008	CARBON 120 JA 1/6W
R110	401 024 7004	CARBON 1K JA 1/6W
R112	401 026 9600	CARBON 470 JA 1/6W
R113	401 025 1308	CARBON 150 JA 1/6W
R115	401 026 1604	CARBON 270K JA 1/6W
R116	401 026 4902	CARBON 330K JA 1/6W
R118	401 026 4308	CARBON 3.3K JA 1/6W
R133	401 024 7400	CARBON 10K JA 1/6W
R143	401 025 7409	CARBON 220 JA 1/6W
R151	401 027 8602	CARBON 8.2K JA 1/6W

Schematic Location	Part No.	Description
R160	401 027 0309	CARBON 47K JA 1/6W
R230	401 027 3003	CARBON 56K JA 1/6W
R231	401 025 1902	CARBON 15K JA 1/6W
R233	401 027 8602	CARBON 8.2K JA 1/6W
R235	401 024 7004	CARBON 1K JA 1/6W
R301	401 026 4605	CARBON 33K JA 1/6W
R306	401 027 9005	CARBON 82K JA 1/6W
R308	401 024 9305	CARBON 1.2K JA 1/6W
R310	401 026 9600	CARBON 470 JA 1/6W
R311	401 024 6700	CARBON 100 JA 1/6W
R312	401 026 7408	CARBON 39K JA 1/6W
R313	401 024 8001	CARBON 1M JA 1/6W
R314	401 024 8001	CARBON 1M JA 1/6W
R315	401 027 8305	CARBON 820 JA 1/6W
R316	401 024 7400	CARBON 10K JA 1/6W
R317	401 027 8602	CARBON 8.2K JA 1/6W
R320	401 026 9303	CARBON 47 JA 1/6W
R324	401 027 8305	CARBON 820 JA 1/6W
R325	401 024 7400	CARBON 10K JA 1/6W
R326	401 026 4605	CARBON 33K JA 1/6W
R328	401 024 7400	CARBON 10K JA 1/6W
R330	401 026 9600	CARBON 470 JA 1/6W
R342	401 026 6609	CARBON 390 JA 1/6W
★R344	401 062 0302	OXIDE-MT 47 JA 1W
★R401	401 069 3702	OXIDE-MT 6.8K JA 2W
R402	401 024 9701	CARBON 12K JA 1/6W
R403	401 026 9600	CARBON 470 JA 1/6W
R404	401 026 4902	CARBON 330K JA 1/6W
★R405	401 061 3502	OXIDE-MT 3.3K JA 1W
R406	401 025 7805	CARBON 2.2K JA 1/6W
R407	401 025 1308	CARBON 150 JA 1/6W
R408	401 021 3009	CARBON 5.6K JA 1/4W
★R409	401 064 9907	OXIDE-MT 10K JA 2W
★R413	401 053 2605	MT-FILM 3.3K FA 1/6W
R414	401 027 5205	CARBON 680 JA 1/6W
R421	401 026 4605	CARBON 33K JA 1/6W
R422	401 027 3003	CARBON 56K JA 1/6W
R423	401 024 7400	CARBON 10K JA 1/6W
R424	401 024 7400	CARBON 10K JA 1/6W
R426	401 024 7707	CARBON 100K JA 1/6W
★R436	401 062 6106	OXIDE-MT 560 JA 1W
R451	401 026 3707	CARBON 33 JA 1/6W
R452	401 026 1307	CARBON 27K JA 1/6W
R453	401 025 4200	CARBON 1.8K JA 1/6W
R454	401 027 5502	CARBON 6.8K JA 1/6W
R456	401 026 7002	CARBON 3.9K JA 1/6W
R457	401 027 2303	CARBON 560 JA 1/6W
R458	401 008 3701	CARBON 2.2 JA 1/2W
R459	401 021 1906	CARBON 560 JA 1/4W
R460	401 025 4200	CARBON 1.8K JA 1/6W
R462	401 027 2600	CARBON 5.6K JA 1/6W
R463	401 026 4308	CARBON 3.3K JA 1/6W
R464	401 027 5908	CARBON 68K JA 1/6W
★R473	401 068 6209	OXIDE-MT 5.6 JA 2W
★R474	401 059 9608	OXIDE-MT 2.2 JA 1W
★R476	401 006 7701	CARBON 1 JB 1/2W
R477	401 024 7004	CARBON 1K JA 1/6W
R478	401 017 3808	CARBON 270K JA 1/4W
★R481	401 008 3800	CARBON 2.2 JB 1/2W
★R482	401 059 5907	OXIDE-MT 18 JA 1W
★R483	401 012 3506	CARBON 10 JB 1/4W
★R485	401 053 2605	MT-FILM 3.3K FA 1/6W
★R486	401 052 6802	MT-FILM 10K FA 1/6W
★R490	401 069 0404	OXIDE-MT 6.8 JA 2W
R495	401 011 1107	CARBON 68 JA 1/2W
★R501	401 019 6302	CARBON 4.7 JB 1/4W
★R502	401 058 8107	OXIDE-MT 120 JA 1W
R505	401 009 7005	CARBON 33K JA 1/2W
R514	401 024 7400	CARBON 10K JA 1/6W
R515	401 024 7400	CARBON 10K JA 1/6W
R518	401 024 7400	CARBON 10K JA 1/6W
R521	401 024 7004	CARBON 1K JA 1/6W
R522	401 025 7805	CARBON 2.2K JA 1/6W
R523	401 024 7004	CARBON 1K JA 1/6W
R524	401 025 7805	CARBON 2.2K JA 1/6W
R525	401 025 4200	CARBON 1.8K JA 1/6W
R526	401 025 7805	CARBON 2.2K JA 1/6W
R527	401 025 7805	CARBON 2.2K JA 1/6W
R529	401 024 7400	CARBON 10K JA 1/6W
R530	401 024 7004	CARBON 1K JA 1/6W
R533	401 024 8001	CARBON 1M JA 1/6W
R534	401 026 9600	CARBON 470 JA 1/6W
R535	401 026 4308	CARBON 3.3K JA 1/6W
R537	401 024 7004	CARBON 1K JA 1/6W
R538	401 024 7004	CARBON 1K JA 1/6W
R539	401 024 7004	CARBON 1K JA 1/6W
R540	401 024 7004	CARBON 1K JA 1/6W
R541	401 026 1307	CARBON 27K JA 1/6W
R542	401 027 2600	CARBON 5.6K JA 1/6W
R543	401 024 7400	CARBON 10K JA 1/6W
R544	401 024 7400	CARBON 10K JA 1/6W
R546	401 024 7004	CARBON 1K JA 1/6W
R547	401 024 7400	CARBON 10K JA 1/6W
R551	401 025 8208	CARBON 22K JA 1/6W
R552	401 027 8602	CARBON 8.2K JA 1/6W
R553	401 027 0309	CARBON 47K JA 1/6W
R554	401 026 9907	CARBON 4.7K JA 1/6W
R555	401 053 4708	MT-FILM 6.8K FA 1/6W
R556	401 026 6609	CARBON 390 JA 1/6W
R557	401 154 1804	MT-FILM 27K FA 1/6W
R558	401 024 9701	CARBON 12K JA 1/6W
R559	401 026 4308	CARBON 3.3K JA 1/6W
R560	401 027 2600	CARBON 5.6K JA 1/6W
R561	401 026 7408	CARBON 39K JA 1/6W
R562	401 027 5502	CARBON 6.8K JA 1/6W
R563	401 027 2600	CARBON 5.6K JA 1/6W
R564	401 027 8602	CARBON 8.2K JA 1/6W
R567	401 026 4308	CARBON 3.3K JA 1/6W
R568	401 026 7002	CARBON 3.9K JA 1/6W
R570	401 026 4308	CARBON 3.3K JA 1/6W
R571	401 026 4308	CARBON 3.3K JA 1/6W
R593	401 024 7400	CARBON 10K JA 1/6W
R594	401 024 7400	CARBON 10K JA 1/6W
R595	401 024 7400	CARBON 10K JA 1/6W
R596	401 024 7400	CARBON 10K JA 1/6W
R597	401 026 4308	CARBON 3.3K JA 1/6W
R598	401 024 7400	CARBON 10K JA 1/6W
R603	401 025 5405	CARBON 2.2 JA 1/6W
R607	401 026 9907	CARBON 4.7K JA 1/6W
R608	401 026 7408	CARBON 39K JA 1/6W
R703	401 025 7409	CARBON 220 JA 1/6W
R706	401 025 7409	CARBON 220 JA 1/6W
R707	401 024 6700	CARBON 100 JA 1/6W
R710	401 025 7409	CARBON 220 JA 1/6W
★R711	401 059 4900	OXIDE-MT 15K JA 1W
★R712	401 059 4900	OXIDE-MT 15K JA 1W
★R713	401 059 4900	OXIDE-MT 15K JA 1W
R715	401 009 1508	CARBON 2.7K JA 1/2W
R716	401 009 1508	CARBON 2.7K JA 1/2W
R717	401 009 1508	CARBON 2.7K JA 1/2W
R1001	401 024 7400	CARBON 10K JA 1/6W
R1002	401 024 7400	CARBON 10K JA 1/6W
R1003	401 024 7400	CARBON 10K JA 1/6W
R1004	401 024 7400	CARBON 10K JA 1/6W
R1005	401 024 7400	CARBON 10K JA 1/6W
R1006	401 024 7400	CARBON 10K JA 1/6W

Schematic Location	Part No.	Description
	SWITCHES	
SW701	610 011 4227	SWITCH, LEVER(SERV/NORM)
SW1001	645 010 7658	SWITCH, PUSH(MENU)
SW1002	645 010 7658	SWITCH, PUSH(CH DOWN)
SW1003	645 010 7658	SWITCH, PUSH(CH UP)
SW1004	645 010 7658	SWITCH, PUSH(VOL -)
SW1005	645 010 7658	SWITCH, PUSH(VOL +)
SW1006	645 010 7658	SWITCH, PUSH(POWER)
	TRANSFORMERS	
T101	645 000 5206	TRANS, OSC, 45. 75MHZ
T102	610 037 6564	S TRANS
T103	610 205 6839	S COIL
T151	610 037 7615	S TRANS
T401	610 000 7901	DRIVE TRANS
	610 000 7918	DRIVE TRANS
★T402	645 004 1488	TRANS, FLYBACK
	VARIABLE RESISTORS	
VR101	645 001 9319	VR B-10K(RF-AGC)
	645 006 5095	VR B-10K
VR301	645 006 2421	VR B-20K(BRIGHT LEVEL)
	645 006 5132	VR B-20K
VR451	645 001 9364	VR B-50K(VERT. SIZE)
	645 006 5217	VR B-50K
VR701	610 019 3673	VR B-10K(RED BIAS)
	610 210 5858	VR B-10K
VR702	610 019 3673	VR B-10K(GREEN BIAS)
	610 210 5858	VR B-10K
VR703	610 019 3673	VR B-10K(BLUE BIAS)
	610 210 5858	VR B-10K
VR704	610 019 3628	VR B-200(RED DRIVE)
VR705	610 019 3628	VR B-200(BLUE DRIVE)
	FILTERS/CRYSTALS	
X101	422 000 9409	SAW F KAF-45ZR-MR-1
X102	610 015 3059	TRAP, CERAMIC 4. 5MHZ
	610 015 3066	CERAMIC TRAP
X153	610 015 2946	CERAMIC FILTER 4. 5MHZ
X301	610 012 0655	CRYSTAL OSCILLATOR
	610 204 4195	CRYSTAL OSCILLATOR
	610 245 9746	CRYSTAL OSCILLATOR
X401	610 012 2970	OSC, CERAMIC 503. 5KHZ
X531	645 002 8885	OSC, CRYSTAL 12. 000MHZ
X532	645 000 6692	OSC, CERAMIC 8. 00MHZ

Schematic Location	Part No.	Description
	MISCELLANEOUS	
A100	610 253 2548	ASSY, PWB, MAIN
★A101	645 004 7022	TUNER, U/V
A101A	610 254 3124	HOLDER ANT
★A101B	645 002 7871	BLOCK, SPECIAL(ANT)
A101C	412 018 8402	SCREW 3X10E
A700	610 254 8860	ASSY, PWB, SOCKET
A1001	645 007 1546	UNIT, RC RECEIVER
A9901	610 254 0345	ASSY, PWB, RC-PWB UNIT
	610 254 0352	ASSY, PWB, RC-PWB UNIT
★F001	423 007 1601	FUSE 125V 4A
	423 007 1809	FUSE 125V 4A
	423 018 8101	FUSE 125V 4A
F001A	610 012 4356	FUSE CLIP
	645 006 4760	HOLDER, FUSE
F001B	610 012 4356	FUSE CLIP
	645 006 4760	HOLDER, FUSE
★K701	610 010 4310	CRT SOCKET
★PS001	408 000 3203	TH PTH631D01BF7R0M140
	408 003 6409	THERMISTOR 901P52E070MP16
★Q901	413 006 4703	CRT A34JRY24X
	414 007 4808	CRT A34KPU02XX
Q901A1	610 117 0154	DY SPACER
	610 117 7924	DY SPACER
Q901A2	610 117 0154	DY SPACER
	610 117 7924	DY SPACER
Q901A3	610 117 0154	DY SPACER
	610 117 7924	DY SPACER
Q901C	610 003 1562	CG PURITY MAGNET
	610 004 3008	CG PURITY MAGNET
	610 217 7787	CG PURITY MAGNET
★RL001	610 009 5540	RELAY(POWER OFF-ON)
	610 009 5649	RELAY
	610 215 6355	RELAY
	645 000 4155	RELAY
SP901	610 055 6614	SPEAKER
★W001	610 222 9660	AC CORD
★W902	610 252 5618	ASSY, WIRE GND CONNECTOR

CABINET PARTS LIST



CABINET PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
1.	610 254 3490	ASSY,CABINET FRONT
2.	610 236 9267	SANYO BADGE
3.	610 251 5718	DEC SHEET
4.	610 249 8523	BUTTON UNITED
	412 036 1805	SCREW 4X14
OR	411 078 1101	SCREW 4X14
5.	610 245 3553	DEC SHEET
6.	610 249 5379	CABINET BACK
	412 036 1805	SCREW 4X14(5 USED)
OR	411 078 1101	SCREW 4X14
7.	610 102 7151	DC HOLDER(2 USED)
	412 000 7604	SCREW 5X30E(4 USED FOR MTG CRT)

ACCESSORY PARTS LIST

KEY NO.	PARTS NO.	DESCRIPTION
	610 216 4886	ROD ANTENNA ASSY
OR	610 216 4916	ROD ANTENNA ASSY
	645 003 3742	ANTENNA CONVERTER
OR	645 007 9061	ANTENNA CONVERTER
	645 006 8515	ASSY,RC TRANSMITTER
OR	645 006 8614	ASSY,RC TRANSMITTER
	610 254 0550	RC-BATTERY COVER
OR	610 254 0581	RC-BATTERY COVER
	610 254 1281	OWNER'S MANUAL

For parts or service contact

SFS CORPORATION

SFS Corporation: 1200 West Artesia Blvd., Compton, California 90220

May / '95 / 2000 MA

Printed in Japan

MODEL DS13530
Chassis No. 13530-00

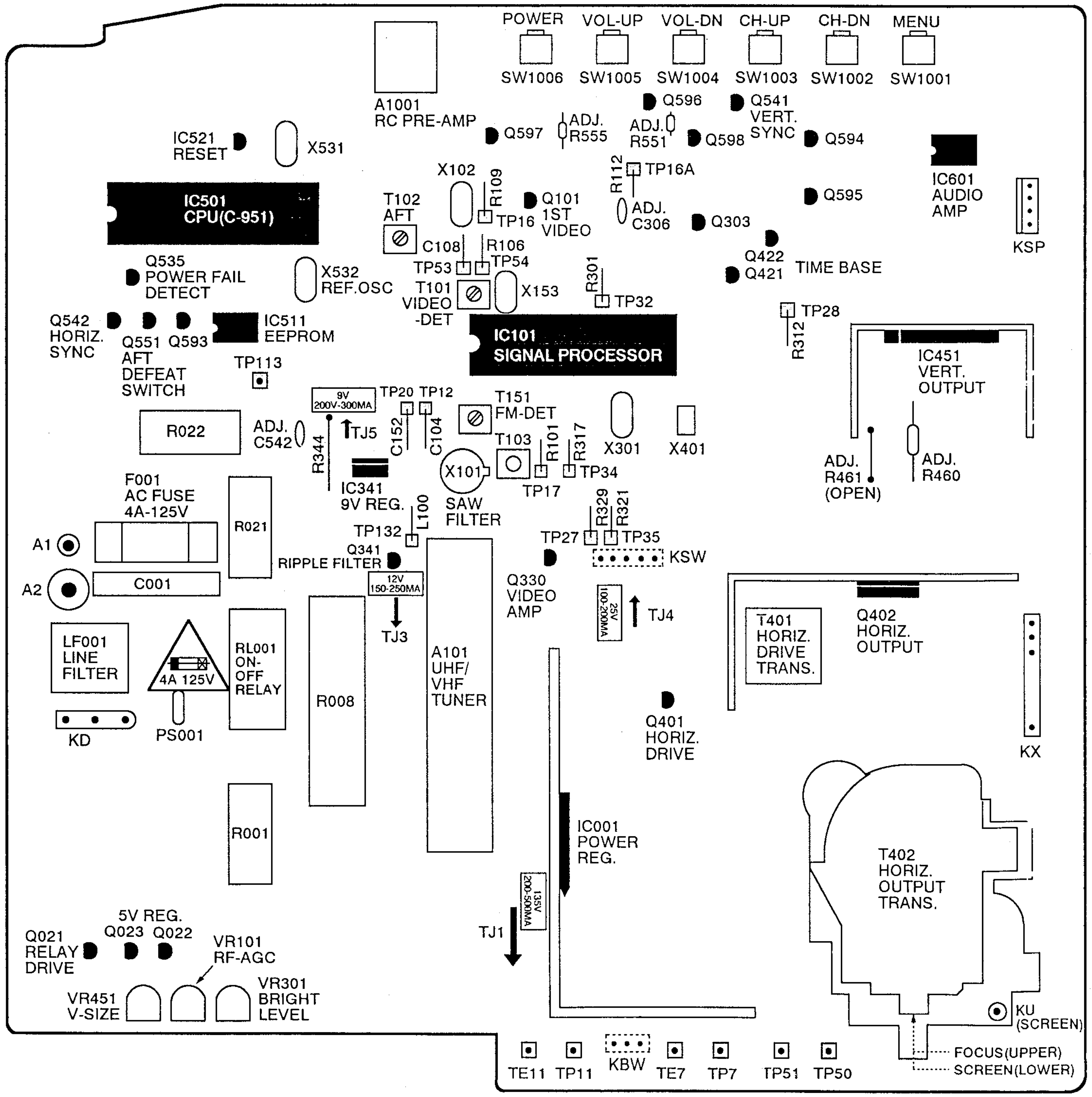
COMPONENT AND TESTPOINT LOCATIONS

MAIN BOARD

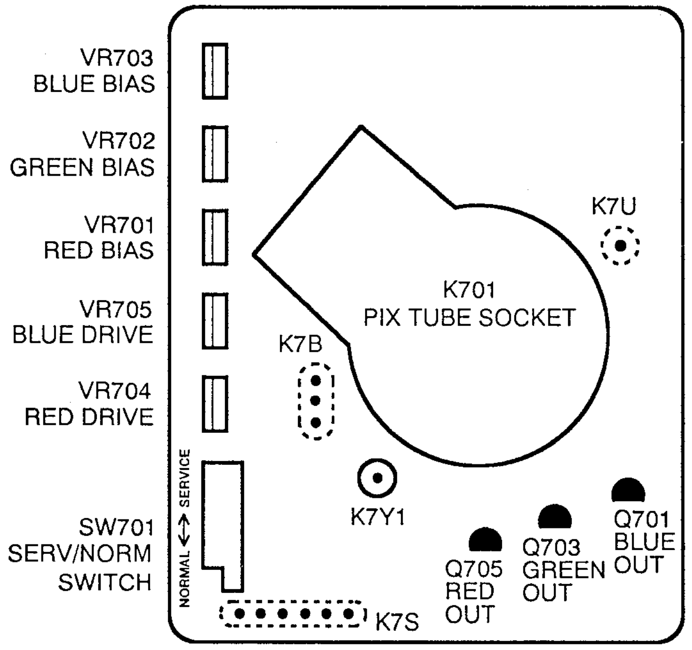
CAUTION

4A 125V

FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE, REPLACE ONLY WITH THE SAME TYPE 4A, 125V FUSE.



PIX TUBE SOCKET BOARD



NOTES
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SCHEMATIC DIAGRAM

NOTES ON SCHEMATIC DIAGRAM

1. All resistance values in ohms K=1,000 M=1,000,000.
2. Unless otherwise noted on schematic, all capacitor values less than 1 are expressed in µ F (Micro Farad) and the values more than 1 are in pF.
3. Unless otherwise noted on schematic, voltage reading taken with "VTVM" from point indicated to chassis ground. Voltage reading taken using a color bar signal on VHF channel 5, all controls at normal. Line voltage at 120 volts. Some voltages may vary with signal strength.
4. Waveforms were taken with color bar signal and controls adjusted for normal picture. Waveforms marked with an * may vary with signal strength.
5. The Symbol indicates fusible resistor, which protects the circuit from possible short circuits.

SERVICE NOTES:

1. When replacing parts on circuit boards, clamp the lead wires to terminals before soldering.
2. When replacing high wattage resistors on circuit board, keep the resistor body 10 mm (3/8") from circuit board.
3. Keep wires away from high voltage and high temperature components.

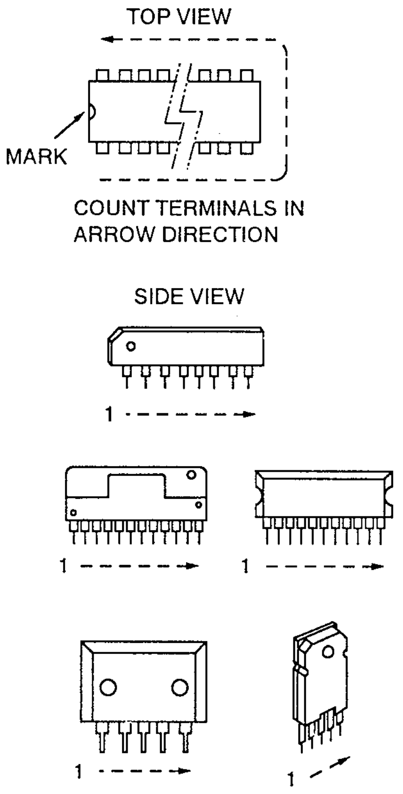
PRODUCT SAFETY NOTICE

THE COMPONENTS DESIGNATED BY A STAR(★) ON THIS SCHEMATIC DIAGRAM DESIGNATE COMPONENT WHOSE VALUES ARE OF SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. SHOULD ANY COMPONENT DESIGNATED BY A STAR NEED TO BE REPLACED, USE ONLY THE PART DESIGNATED IN THE PARTS LIST. DO NOT DEVIATE FROM THE RESISTANCE, WATTAGE AND VOLTAGE RATINGS SHOWN.

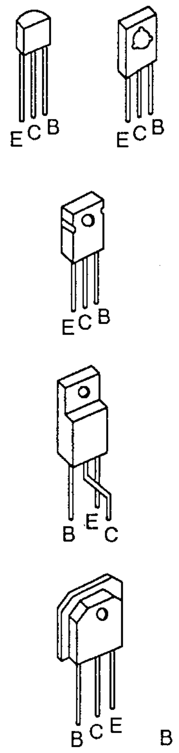
X-RADIATION WARNING NOTE

THIS TV CONTAINS CRITICAL PARTS TO PROTECT AGAINST X- RADIATION. NOMINAL 2ND ANODE VOLTAGE IS 21.0KV AT ZERO BEAM CURRENT AT 120VOLTS AC LINE, AND MUST NOT EXCEED 22.0KV UNDER ANY OPERATING CONDITION. SEE HIGH VOLTAGE CHECK ON PAGE 3.

INTEGRATED CIRCUITS

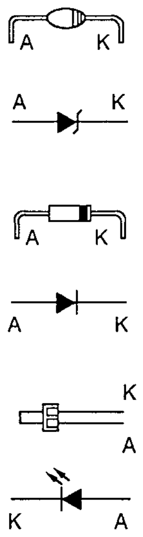


TRANSISTORS



B ... BASE
C ... COLLECTOR
E ... EMITTER

DIODES



INFRARED EMITTING DIODE

A ... ANODE
K ... CATHODE

CAPACITOR AND RESISTOR CODE CHART

CAPACITOR (Example)

500 C K 1500 B

Characteristics
Value code
Tolerance code
Material code
Voltage rating

Tolerance code

D	± 0.5pF
T	+ 50% − 10%
J	± 5%
K	± 10%
M	± 20%
N	± 30%
P	+ 100% − 0%
Z	+ 80% − 20%
C	± 0.25pF

Material code

C	Ceramic
E	Electrolytic
F	Polyester
N	Polypropylene
T	Tantalum
K	Ceramic
H	MT-Composite
P	NP. Electrolytic
M	MT-Polypropylene

RESISTOR (Example)

6 Y K 4.7

Value code
Tolerance code
Material code
Wattage rating

Tolerance code

D	± 0.5%
F	± 1%
G	± 2%
J	± 5%
K	± 10%
M	± 20%

Material code

F	Fusible
N	Metalized Carbon
S	Oxide Metalized
Y	Wire Wound
C	Solid
D	Carbon Film
W	Wire Wound

CAUTION

FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE, REPLACE ONLY WITH THE SAME TYPE 4A, 125V FUSE.

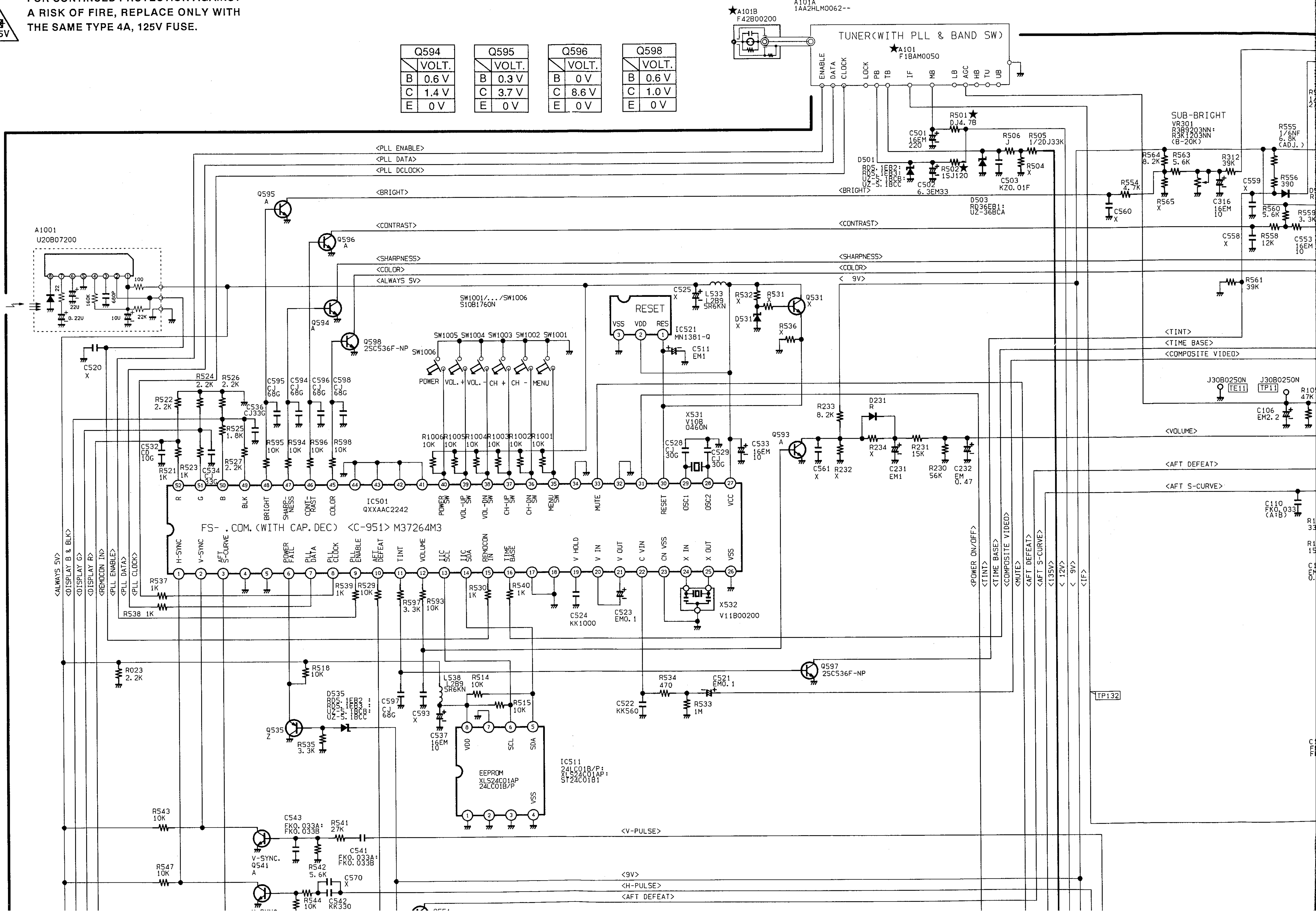
4A 125V

Q594	
	VOLT.
B	0.6 V
C	1.4 V
E	0 V

Q595	
	VOLT.
B	0.3 V
C	3.7 V
E	0 V

Q596	
	VOLT.
B	0 V
C	8.6 V
E	0 V

Q598	
	VOLT.
B	0.6 V
C	1.0 V
E	0 V



IC451

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13
	8.9V	4.5V	4.5V	0V	0V	4.5V	4.2V	25.8V	0.8V	1.4V	0V	13.5V	26.1V

Q303	VOLT.
B	3.7 V
C	9.1 V
E	3.0 V

Q330	VOLT.
B	5.2 V
C	0.3 V
E	5.3 V

Q341	VOLT.
B	13.1 V
C	13.4 V
E	12.4 V

Q021	POWER ON	POWER OFF
B	0.7 V	0 V
C	0 V	16.6V
E	0 V	

Q022	POWER ON	POWER OFF
B	5.0 V	5.8 V
C	18.0 V	5.1 V
E	5.0 V	

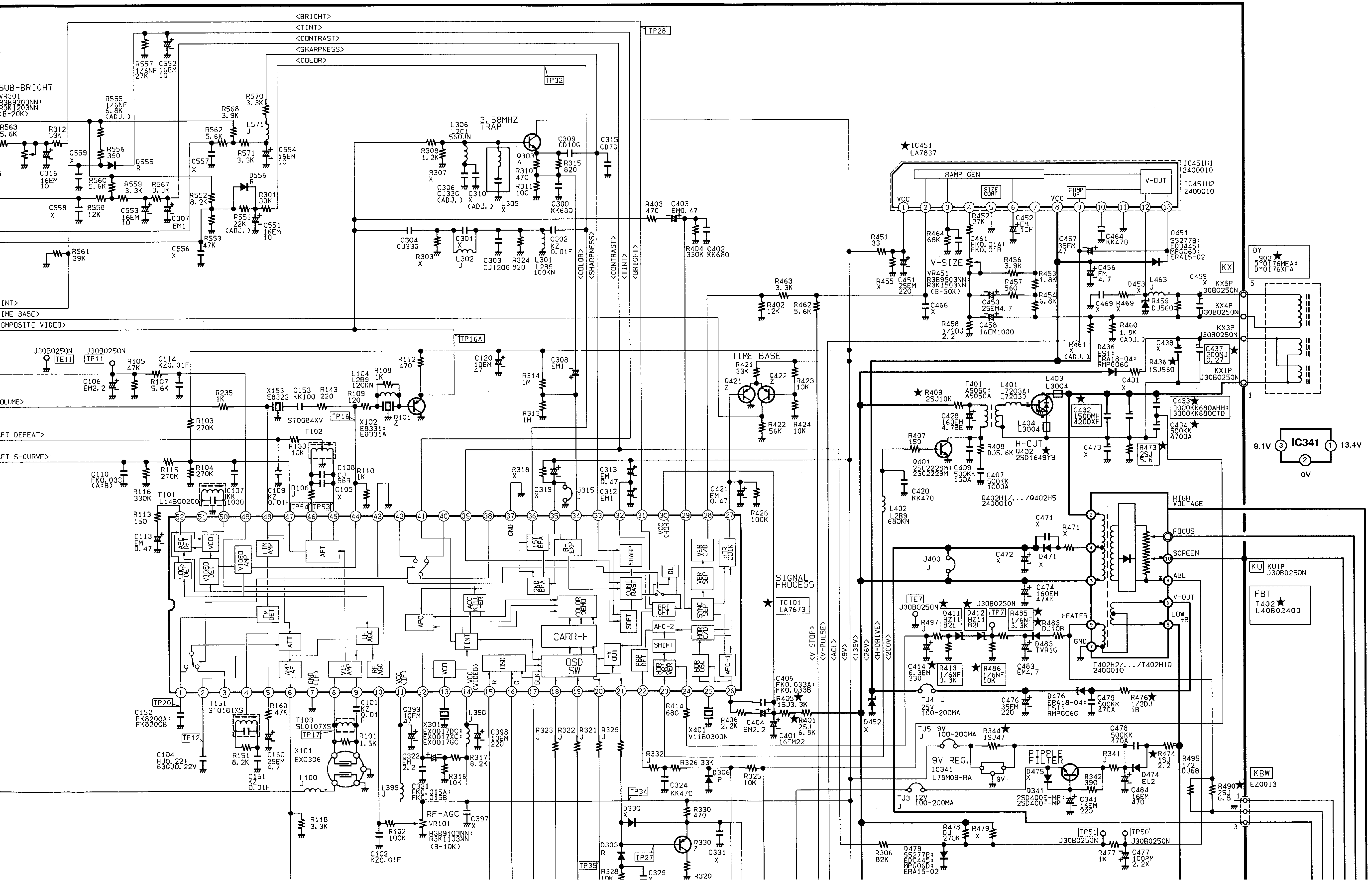
Q023	POWER ON	POWER OFF
B	4.4 V	16.6 V
C	5.0 V	
E	5.2 V	17.3 V

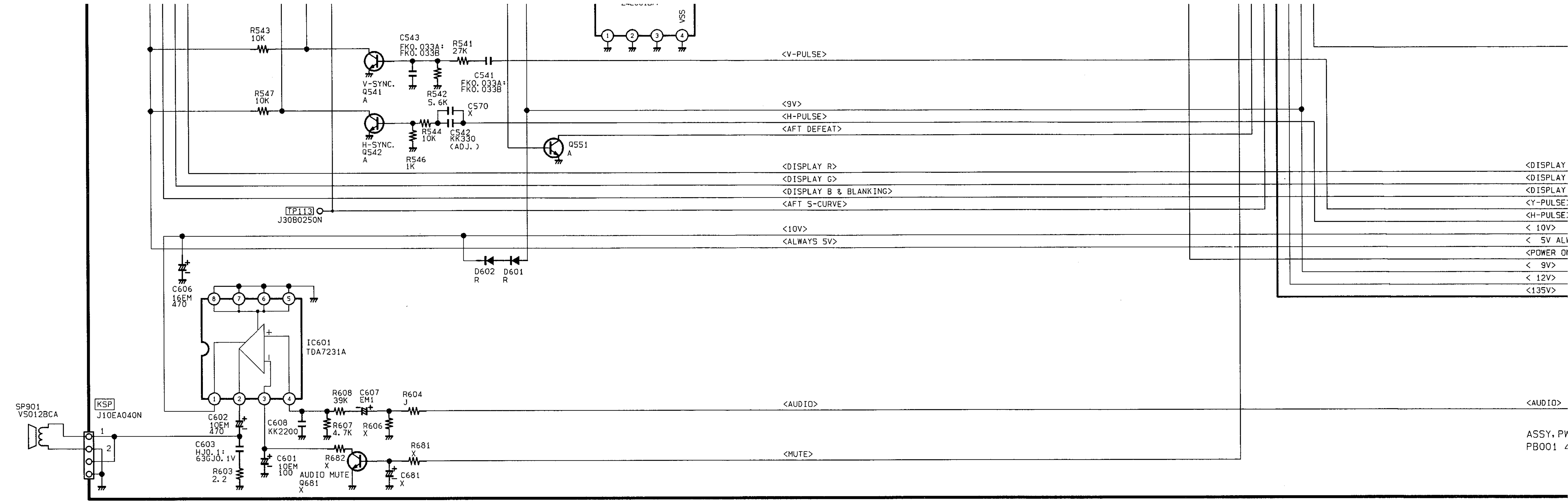
Q401	VOLT.
B	0.3 V
C	52.7 V
E	0 V

Q402	VOLT.
B	0.9 V
C	—
E	0.9 V

Q421	VOLT.
B	6.5 V
C	0 V
E	5.2 V

Q422	VOLT.
B	4.6 V
C	5.2 V
E	5.2 V



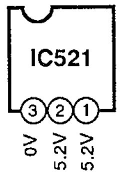


Q535	
	VOLT.
B	4.4 V
C	0 V
E	4.9 V

Q541	
	VOLT.
B	0 V
C	5.0 V
E	0 V

Q542	
	VOLT.
B	0 V
C	4.4 V
E	0 V

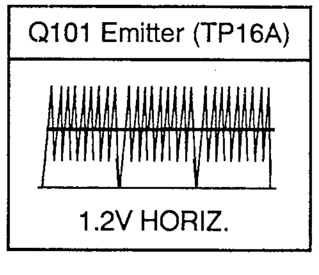
Q551	
	VOLT.
B	0.7 V
C	0 V
E	0 V



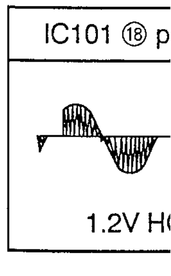
Q593		
	VOL. MIN	VOL. MAX
B	0.7 V	0 V
C	0 V	
E	0 V	

Q597	
	VOLT.
B	0.6 V
C	0.7 V
E	0 V

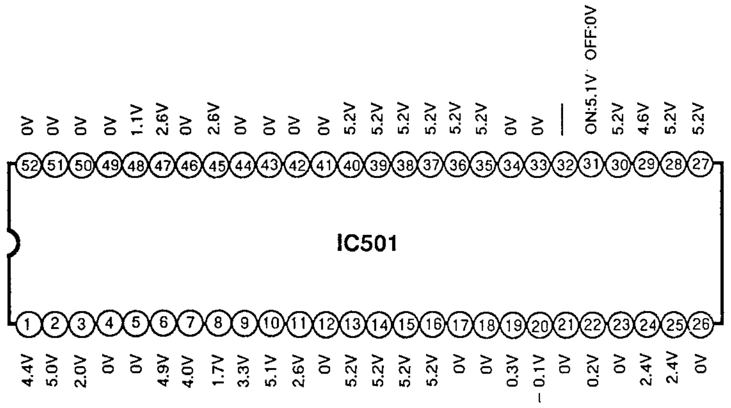
Q101	
	VOL
B	3.0
C	0 V
E	3.7

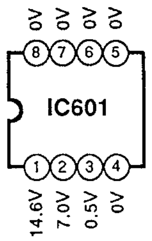

Q101 Emitter (TP16A)

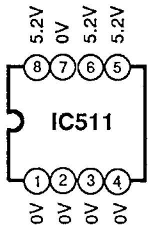
1.2V HORIZ.


IC101 ⑱ p

1.2V H

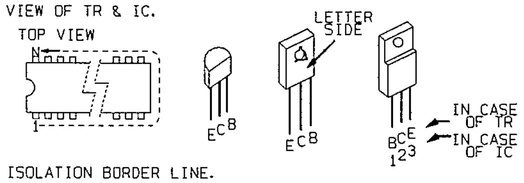






NOTES:

1. RESISTORS SPECIFIED WITH RESISTANCE VALUE ARE "1/6DJ".
2. RESISTORS SPECIFIED WITH TYPE OF RESISTOR, TOLERANCE AND RESISTANCE VALUE ARE "1/4".
3. ALL CAPACITORS ARE 50WV RATING UNLESS OTHERWISE NOTED.
4. PARTS MARKED WITH ▭ ARE RELATED WITH X-RADIATION.
5. THICK LINES ARE 15WATTS SUPPLY LINE.
6. VIEW OF TR & IC.



7. ISOLATION BORDER LINE.

COLD SIDE ┃ HOT SIDE

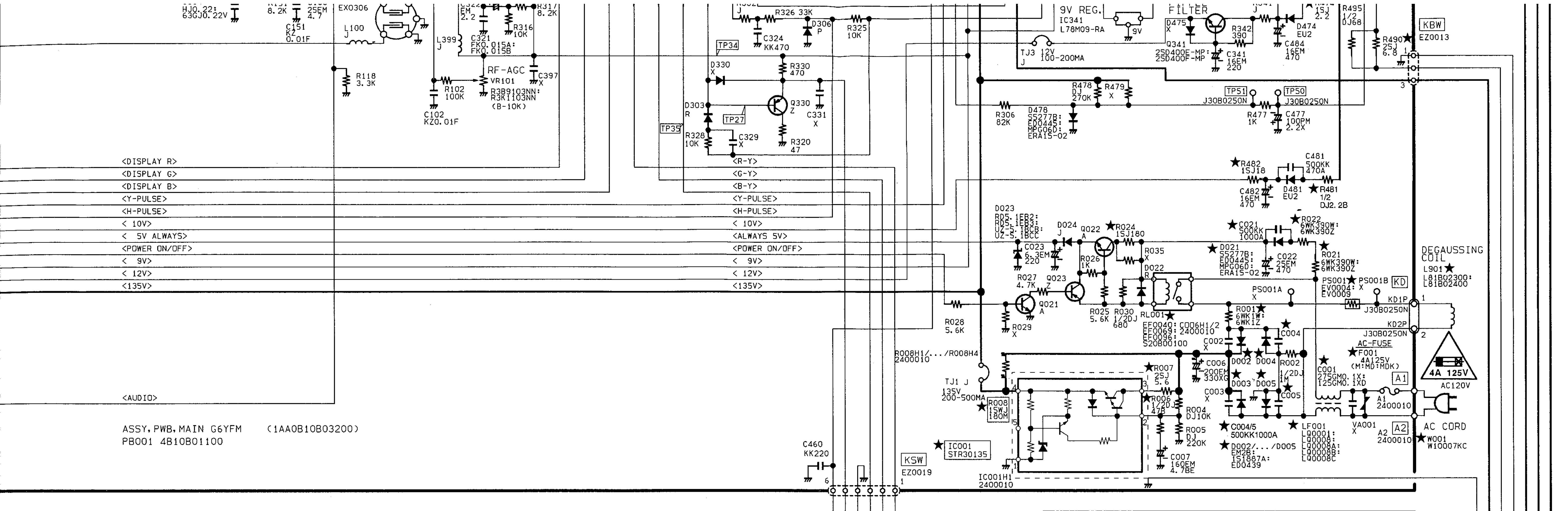
8. LIST OF REPLACEABLE DIODES.

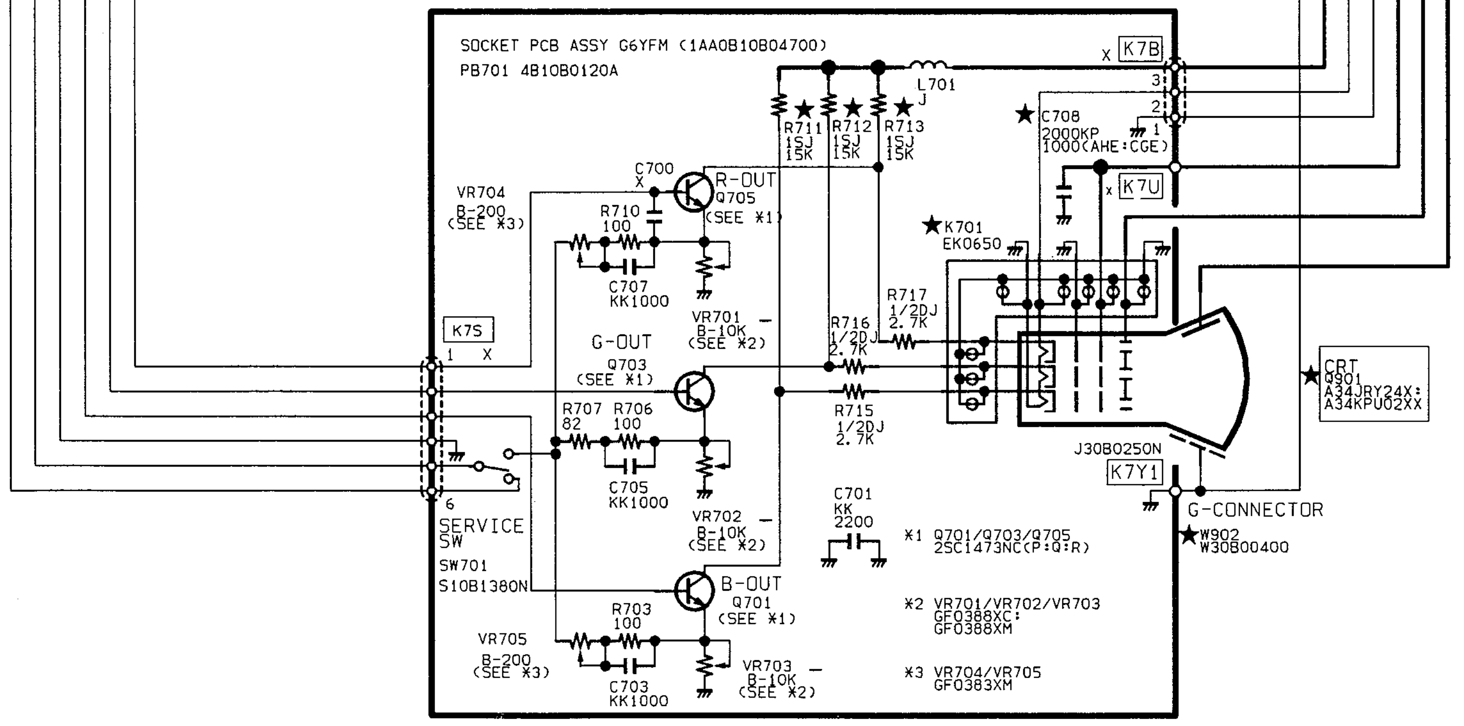
R (7DD00019)	1S1555, 1S2473, 1S2076, DS442, 1N4148
P (7DD00021)	1S1553, 1S2076A, 1S2471, 1N4148

9. LIST OF REPLACEABLE TRANSISTORS.

	2SC536	2SC945A	2SC1815	2SC1740	2SC1740S
A (7QT00214)	E, F, G	P, Q, R	O, Y, G	Q, R, S	Q, R, S
C (7QT00422)	F, G	P, Q	Y, G	Q, R, S	Q, R, S
	2SA608	2SA564A	2SA1015	2SA933	2SA933S
Z (7QT00418)	E, F	Q, R	O, Y, G	Q, R	Q, R

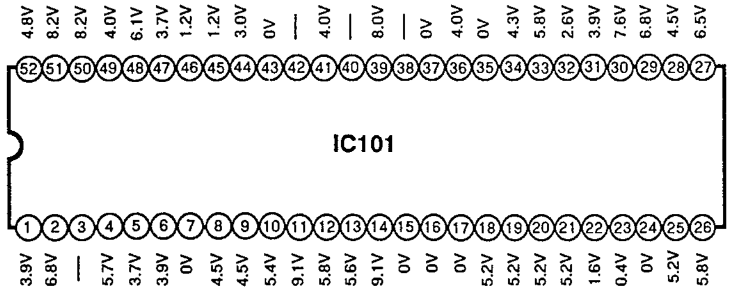
10. "J" : JUMPER WIRE.
"X" : PART NOT USED.



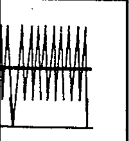


Q101

	VOLT.
B	3.0 V
C	0 V
E	3.7 V

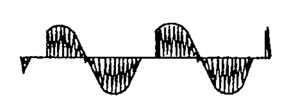


(TP16A)



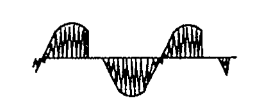
RIZ.

IC101 ⑱ pin (R-Y)



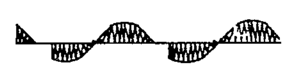
1.2V HORIZ.

IC101 ⑲ pin (G-Y)



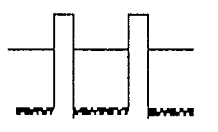
0.4V HORIZ.

IC101 ⑳ pin (B-Y)



1.3V HORIZ.

IC101 ㉑ pin (-Y)



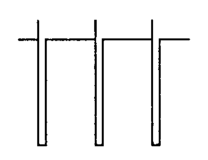
6V HORIZ.

473, 1S2076, DS442, 1N4148
076A, 1S2471, 1N4148

TORS.

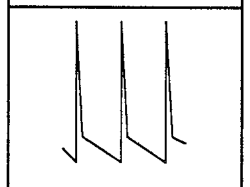
2SC945A	2SC1815	2SC1740	2SC1740S
P, Q, R	O, Y, G	Q, R, S	Q, R, S
P, Q	Y, G	Q, R, S	Q, R, S
2SA564A	2SA1015	2SA933	2SA933S
Q, R	O, Y, G	Q, R	Q, R

IC451 ② pin



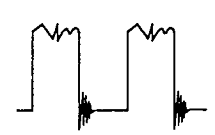
4.7V VERT.

IC451 ⑫ pin



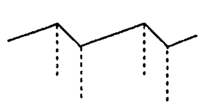
50V VERT.

Q401 Base



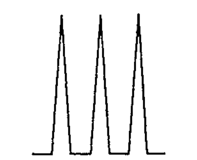
0.7V HORIZ.

Q402 Base



9.5V HORIZ.

T402 ⑨ pin



30V HORIZ.

Q701

	VOLT.
B	5.2 V
C	122.7V
E	5.1 V

Q703

	VOLT.
B	5.2 V
C	125.3V
E	5.1 V

Q705

	VOLT.
B	5.2 V
C	129V
E	5.3 V